

Biomass Survey results for Nightingale which include the recent February 2016 Leg 2 survey results

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At the end of 2015, following indications in the recent biomass survey CAL data, provided by the September 2015 survey, that there may be a reduction in the 50-65mm size classes, concern was raised that this could be a “post-OLIVA” effect moving through the size classes and becoming evident only now due to the time lag between the OLIVA incident and possible resultant juvenile mortality. It was decided that although the stock assessments take only Leg 1 biomass survey data into account – and that the Leg 2 survey are no longer performed – that a once off Leg 2 biomass survey at Nightingale would be useful to examine this matter.

Biomass survey index results

Figure 1 shows both the Leg 1 (top) and Leg 2 (bottom) Nightingale biomass survey indices.

Biomass survey catch-at-length (CAL) data results

Figures 2a and 2b report the Leg1 and Leg2 (respectively) CAL data for the Nightingale surveys for all years for which data are available. Figures 3a and b compare the most recent survey data (Sept 2015 for Leg1 and Feb 2016 for Leg2) with the historic average data. Note that the Leg2 surveys for Feb 2016 show the same pattern as in the Sept 2015 of an absence of smaller lobster compared to the situation in earlier years, again suggesting that this might be (delayed) evidence of an adverse impact of the OLIVA incident on recruitment.

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Figure 1: Biomass indices (in terms of the average mass caught per trap) for the Leg 1 (top) and Leg 2 (bottom) surveys for Nightingale. The means (and assumed log normal) 95% confidence intervals are shown. The vertical red arrow indicates the OLIVA incident.

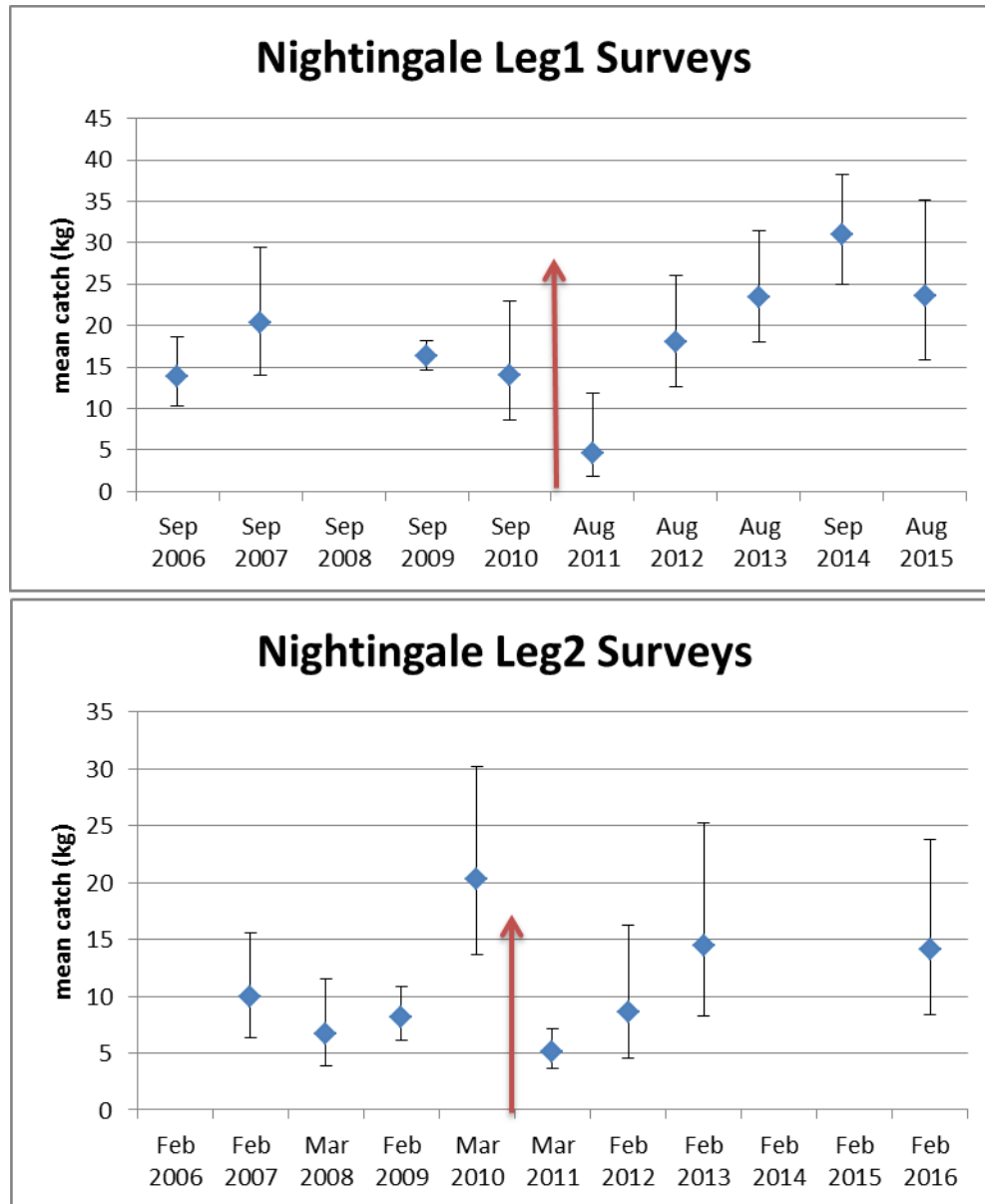


Figure 2a: Nightingale biomass survey **Leg 1** catch-at-length proportions for males (top), females (middle) and the % females (bottom).

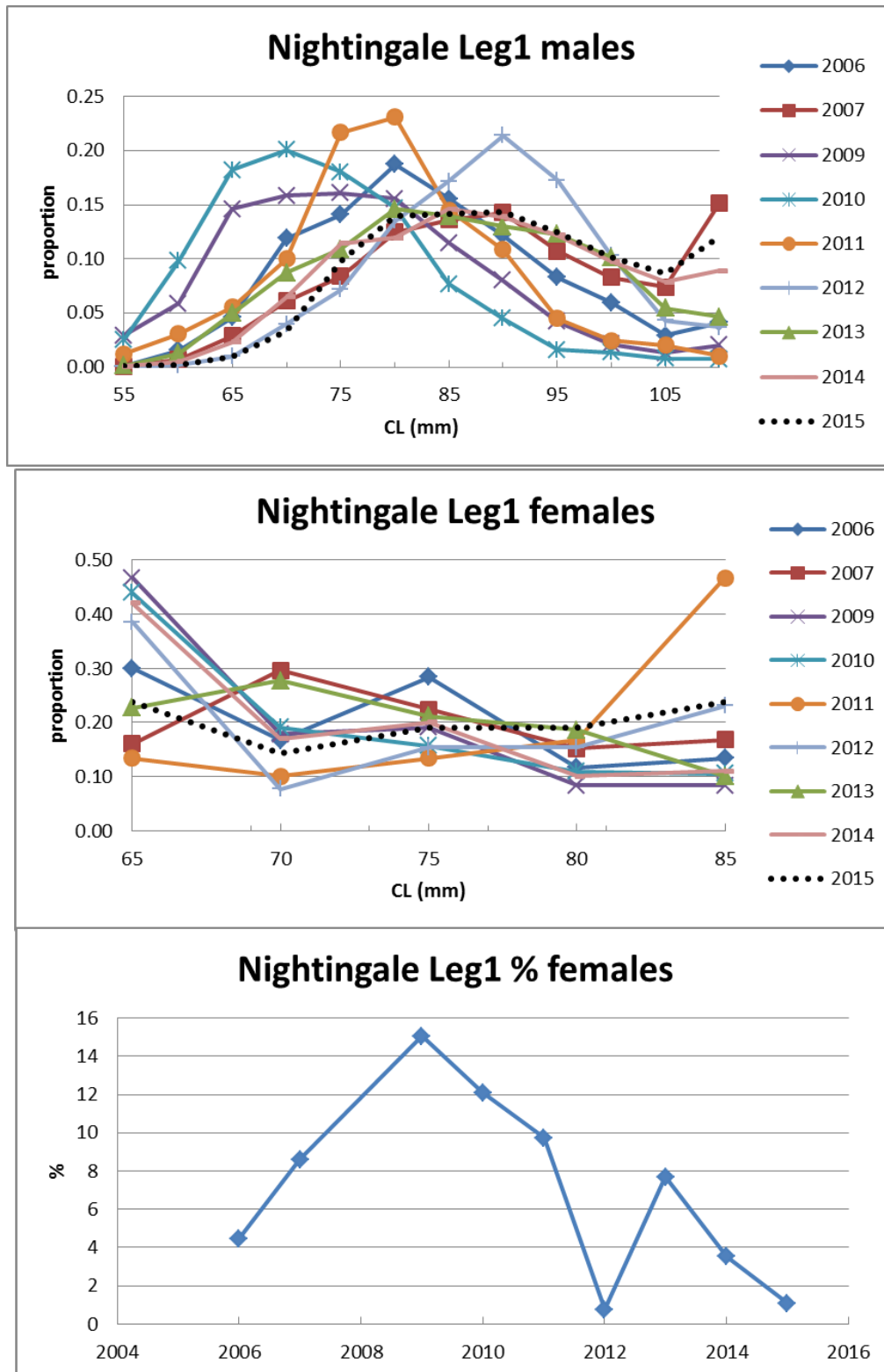


Figure 2b: Nightingale biomass survey **Leg 2** catch-at-length proportions for males (top), females (middle) and the % females (bottom).

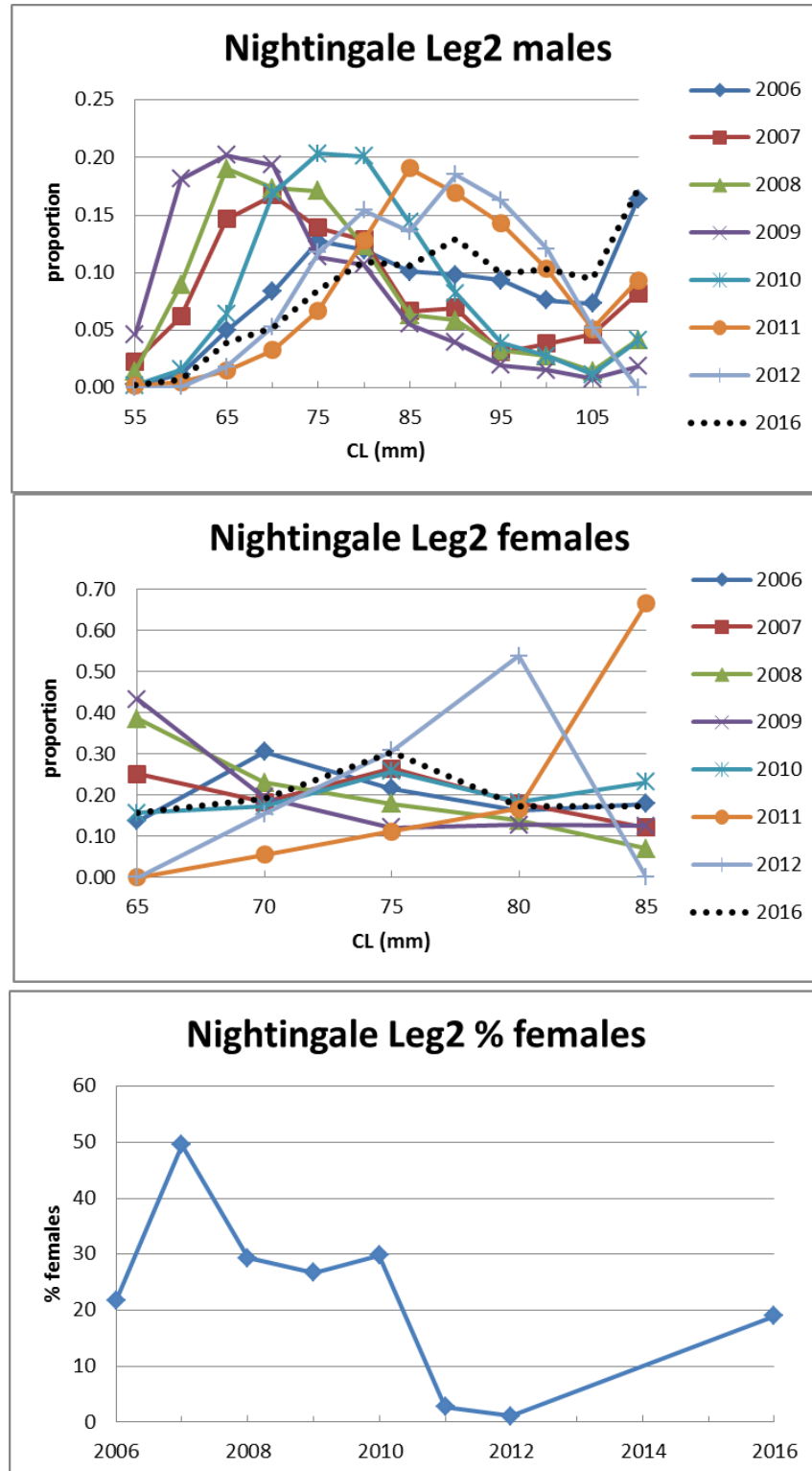


Figure 3a: Nightingale biomass survey **Leg 1** catch-at-length proportions for males (top), females (middle) and the % females (bottom) – comparing the most recent (Sept 2015) data with the 2014 and the historic average data (2006-2013).

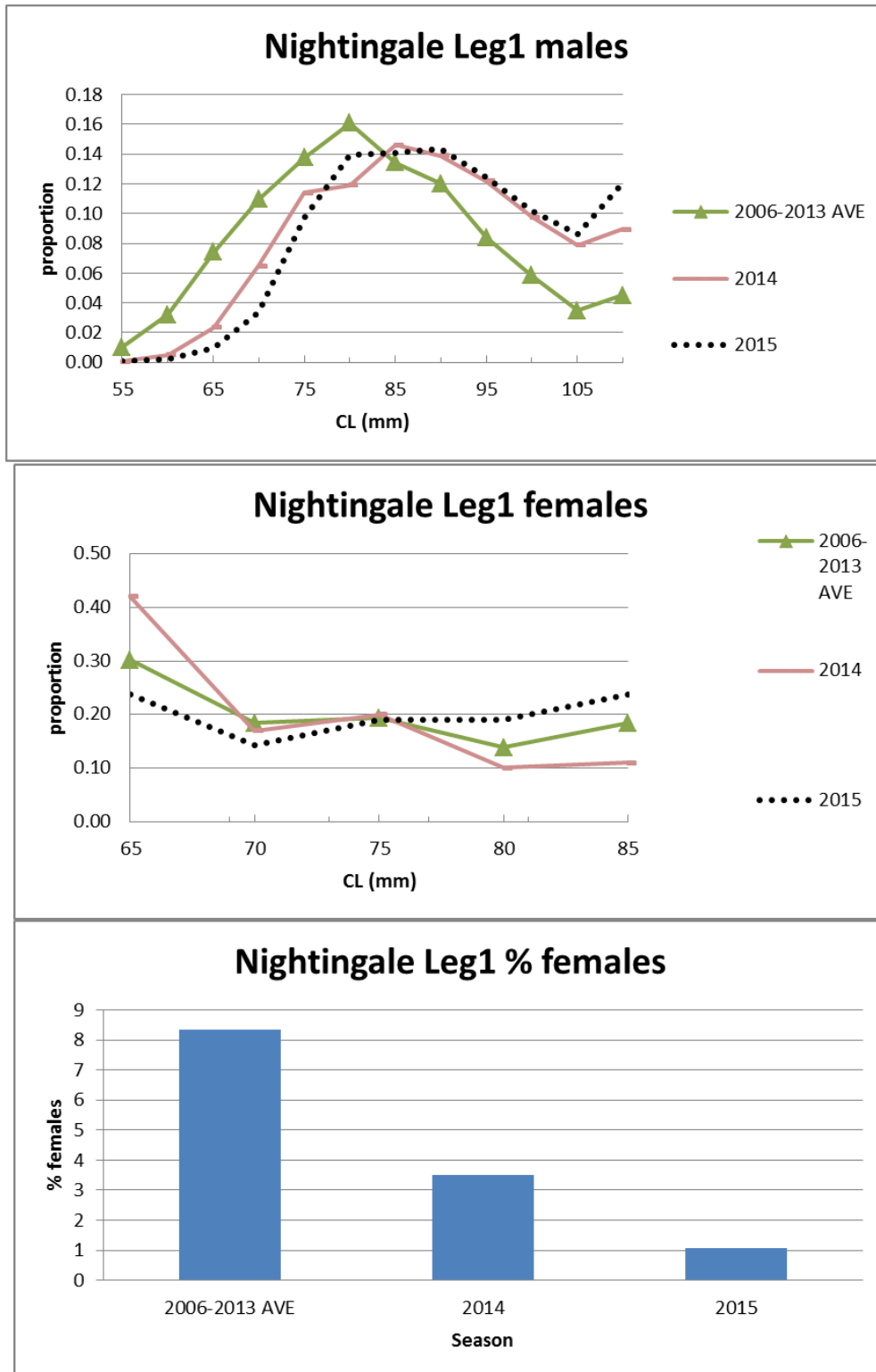


Figure 3b: Nightingale biomass survey **Leg 2** catch-at-length proportions for males (top), females (middle) and the % females (bottom) – comparing the most recent (Feb 2016) data with the historic average (2006-2012).

